

## CLAIMS

What is claimed is:

5           1.       A multi-layer material for forming an image on a substrate, the material comprising an embossable layer comprising a plurality of panels, wherein each individual panel is tinted with one of the primary colors and is processed to diffract incoming light at a predetermined reflection angle  $\alpha_n$ , which predetermined angle  $\alpha_n$  is different for each individual panel.

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          2.       The material of claim 1, wherein each individual panel is processed by being embossed to diffract incoming light at the predetermined angle  $\alpha_n$ , which angle  $\alpha_n$  is different from the angles of reflection of the embossings in other panels.

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          3.       The material of claim 1, wherein each individual panel is processed to comprise a plurality of pixels embossed in such a way that all pixels disposed within the same individual panel diffract incoming light at the predetermined angle of  $\alpha_n$ , resulting in a multi-panel arrangement wherein each panel comprises pixels embossed to diffract incoming light at an angle different from the angles of diffraction of the pixels in other panels.

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          4.       The material of claim 1, further comprising a thermally stable layer, a wear resistant layer or top coat, a reflective layer overlaid upon the embossable layer and a heat activated adhesive layer serving to attach the material to the substrate upon heat activation.

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          5.       The material of claim 1, wherein a plurality of angles  $\alpha_n$  ( $n \leq 256$ ) correspond to a plurality of predetermined numbers forming a sequence of numbers.

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          6.       The material of claim 1, wherein the primary colors comprise yellow-magenta-cyan-black.

7. A method of forming a color image having a holographic appearance on a substrate, the image being comprised of image forming pixels, the method comprising:  
providing a transfer material having an embossable layer comprising a plurality of  
5 panels, wherein each individual panel is tinted with one of the primary colors and is  
processed to diffract incoming light at a predetermined reflection angle  $\alpha_n$ , which  
predetermined angle  $\alpha_n$  is different for each panel; and  
forming the color image on the substrate by selective pixel transferring of the  
image forming pixels from each individual panel tinted with one of the primary colors  
10 onto the substrate.

8. The method of claim 7, wherein selective pixel transferring comprises heat  
activating of each pixel of the image forming pixels and causing each pixel to separate  
from the transfer material and to adhere to the substrate.

9. The method of claim 8, wherein selective pixel transferring comprises heat  
activating of each pixel of the image forming pixels and causing each pixel to separate  
from the transfer material and to adhere to the substrate.

10. The method of claim 7, further comprising providing a computer  
controlling selective pixel transferring of the image forming pixels from the transfer  
material to the substrate to form the holographic image.

11. A multi-layer material for forming an image on a substrate, wherein any  
25 layer of the multi-layer material is tinted with one of the primary colors, the material  
comprising an embossable layer comprising a plurality of panels, wherein each individual  
panel corresponds to one of the primary colors and is processed to diffract incoming light  
at a predetermined reflection angle  $\alpha_n$ , which predetermined angle  $\alpha_n$  is different for each  
individual panel.

12. A method of forming an image having a holographic appearance on a substrate, the image being comprised of image forming pixels, the method comprising:

providing a multi-layer transfer material wherein any layer of the multi-layer material is tinted with one of the primary colors, the material having an embossable layer comprising a plurality of panels, wherein each individual panel corresponds to one of the primary colors and is processed to diffract incoming light at a predetermined reflection angle  $\alpha_n$ , which predetermined angle  $\alpha_n$  is different for each panel; and

forming the image on the substrate by selective pixel transferring of the image forming pixels from each individual panel tinted with one of the primary colors onto the substrate.

13. The method of claim 12, wherein selective pixel transferring comprises blending individual pixels.

14. The method of claim 12, wherein forming the color image on the substrate by selective pixel transferring comprises forming stand alone pixels on the substrate.

15. A holographic image formed on a substrate, the holographic image comprising a plurality of holographic dots, wherein each of the dots is comprised of either a dot tinted in one of the primary colors or of more than one dots tinted in one of the primary colors, and wherein each dot diffracts light at a predetermined diffraction angle.